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Michael Lewis Stein

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EXAMINER

ALVESTEFFER, STEPHEN D

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/808,142	Applicant(s) STEIN ET AL.	
	Examiner Stephen Alvesteffer	Art Unit 2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-92 is/are pending in the application.
- 4a) Of the above claim(s) 44,48-57 and 65-81 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43,45-47,58-64 and 82-92 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20071220</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is responsive to the Request for Continued Examination (RCE) filed February 20, 2008. Claims 1-4, 7, 9-19, 21, 24-26, 29-34, 36-43, 45-47, 58-64, 82, 84, and 85 are amended. Claims 44, 48-57, and 65-81 are withdrawn from consideration. Claims 87-92 are new. Claims 1, 46, 47, 58, 82, and 92 are independent. Claims 1-92 remain pending.

The Information Disclosure Statement (IDS) filed December 20, 2007 has been considered by the examiner.

Claim Objections

Claims 22, 23, and 92 are objected to because of the following informalities:

- In claim 22, “electronic **patent** record” should be corrected to –electronic **patient** record—
- In claim 23, “electronic **patent** record” should be corrected to –electronic **patient** record—
- In claim 92 line 4, the semi-colon in “comprising;” should be changed to a colon, —comprising:—

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 7, 11-16, 20, 21, 35-37, 39-43, 45-47, 58-64, 82-85, and 87-92 are rejected under 35 U.S.C. 102(b) as being anticipated by Macrae et al. (hereinafter Macrae), United States Patent 5,786,816.

Regarding claim 1, Macrae teaches a graphical user interface (GUI) for assisting a healthcare practitioner in diagnosing and treating patients by interacting with the healthcare practitioner during progression through a stored clinical best practice workflow comprised of a plurality of interlinked steps (see column 1 lines 6-11; *"The present invention relates to providing graphic medical healthcare plans (protocols), and in particular a graphic user interface, for developing, viewing and implementing medical healthcare plans"*), the GUI comprising: a page including a map for assisting the healthcare practitioner to navigate the stored clinical best practice workflow, the map comprising a plurality of interlinked nodes, wherein each node has a unique relationship with a step in the stored best practice workflow, the plurality of interlinked nodes graphically represent a plurality of possible patient care pathways across the map, and each patient care pathway comprises two or more of the plurality of interlinked nodes (see Figure 1 and column 6 lines 26-31; *"In Flow Chart view 11, the process flow begins with a Start node, enters into the first Order nodes, and flows out to Result nodes. After the results are entered, the process flow continues on to a Flow Control node where the next step in the treatment is determined"*); data entry means for entering clinical data relating to a particular selected node, the data entry means comprising display means

for displaying, within a portion of the page, a predetermined data entry request and a response made by the healthcare practitioner to the request (see Figure 3 and column 6 line 53 through column 7 line 8; *“a user can start the flow, enter order result into the various nodes, and move through the flow as the treatment progresses using the Flow Chart view instead of the Chart view if the user desires”*); data recording means for storing the response, made by the healthcare practitioner to the request, in a data record (see column 2 lines 44-55; *“Processing means controls the storage means, input means and the display means in response to stored programs and input data”*); pathway means arranged to use the response of the healthcare practitioner stored in the data record to suggest a next step within the stored best practice workflow, thereby assisting the healthcare practitioner to determine a particular patient care pathway across the map (see column 7 lines 50-60; *“The Flow Control node contains rules that select a branch at a decision point in a template or plan, and estimates of the likelihood of branching down given paths. During patient charting, the Flow Control node suggests the next step to the healthcare provider based on the rules and the results entered in Result nodes”*); and graphical means for graphically representing in the page a patient care pathway across the map selected by the healthcare practitioner (see column 19 lines 36-44; *“When a user takes a branch down a path that leads to a Plan node in the patient's chart, the Plan node is highlighted in both the Flow Chart and the patient Chart views”*).

Regarding claim 2, Macrae teaches that the plurality of interlinked nodes represent a complete stored clinical best practice workflow on a single page (see Figure 1).

Regarding claim 3, Macrae teaches that each node represents an action, decision or result within the stored clinical best practice workflow (see column 7 lines 27-34; *“There are five kinds of nodes: Start, Order, Results, Flow Control, and Exit”*).

Regarding claim 4, Macrae teaches that the data entry means comprises presentation means for presenting data relevant to a location of the selected node within the plurality of interlinked nodes and selection means for enabling the healthcare practitioner to select at least some of that data (see column 11 line 28; *“Or1 node is selected by clicking it”*).

Regarding claim 6, Macrae teaches that the data entry means is arranged to use the entered data at a first node to determine further information required at a second node, linked to the first node (see column 18 lines 48-53; *“Each time an order result is entered, the rules in the Flow Control node are evaluated to see if enough information is available to branch to the next step in the plan. When all of the order results specified in a rule are entered, the rule is evaluated. If the rule is satisfied, the rule will become active and take the plan down the corresponding path”*).

Regarding claim 7, Macrae teaches updating means for updating any information related to the step in the stored clinical best practice workflow with entered data (see column 9 lines 57 and 58; *“Edit button 119 edits the detail of the selected order, including the order’s result values when clicking”*).

Regarding claim 11, Macrae teaches analyzing means for analyzing the entered data and generating a list of actions associated therewith and listing means for listing the list of associated actions to the healthcare practitioner adjacent the plurality of displayed interlinked nodes (see Figure 2, showing the plurality of displayed interlinked nodes and a list of actions with associated cost analysis at the bottom).

Regarding claim 12, Macrae teaches that at least some of the nodes include information means providing a graphical indication that concealed clinical information relating to the step in the stored best practice workflow associated with that node is available for presentation on the page, the information means being arranged to reveal the concealed clinical information on selective interaction with the nodes by the healthcare practitioner (see column 6 lines 38-42; *"The Zoom view is used to see the details inside the nodes of the template. Each node is magnified or expanded to show information contained within, as well as the relationships between the nodes in the flow chart. A user can use this view to examine the entire template"*).

Regarding claim 13, Macrae teaches that the graphical indication is a graphical icon (see Figure 2).

Regarding claim 14, Macrae teaches that the information means is arranged to provide a plurality of different levels of detail of information, in accordance with a selection made by the healthcare practitioner (see column 6 lines 38-42; *"The Zoom view is used to see the details inside the nodes of the template. Each node is magnified or expanded to show information contained within, as well as the relationships between the nodes in the flow chart. A user can use this view to examine the entire template"*).

Regarding claim 15, Macrae teaches action list means for generating a list of actions and presenting the same to the healthcare practitioner adjacent the plurality of displayed interlinked nodes, the action list means being arranged to determine the list from analysis of the healthcare practitioner's navigation through the plurality of interlinked nodes (see Figure 2, showing the plurality of displayed interlinked nodes and a list of actions with associated cost analysis at the bottom).

Regarding claim 16, Macrae teaches that the action list means is arranged, at the end of traversal of a plurality of interlinked nodes comprising the page, to present the list to the healthcare practitioner with options for the healthcare practitioner to confirm each action, and to determine the list of actions to be implemented from the healthcare practitioner's confirmation (see Figure 2, showing the plurality of displayed interlinked nodes and a list of actions with associated cost analysis at the bottom).

Regarding claim 20, Macrae teaches a new page linking means for linking a node at the end of a branch of the plurality of interlinked nodes within one page to a node within another different page (see Figure 23 and column 19 lines 45-51; *"When a user charts a patient plan into a Plan node, the previous plan is discontinued and the new plan is started. The view of the new plan will be used to continue charting"*).

Regarding claim 21, Macrae teaches that the new page linking means comprises a graphical icon and selection by the healthcare practitioner comprises interaction between an end-user navigational tool and the icon (see Figure 23 and column 19 lines 45-51; *"When a user charts a patient plan into a Plan node, the*

previous plan is discontinued and the new plan is started. The view of the new plan will be used to continue charting”).

Regarding claim 35, Macrae teaches editing means for editing the plurality of interconnected nodes on a page, the editing means being arranged to update the stored workflow to reflect any change made to the page (see Figure 1 and column 6 lines 14-25; *“FIG. 1 illustrates an example of a Template Builder window with an open template”*).

Regarding claim 36, Macrae teaches that the editing means is arranged to enable the healthcare practitioner to add a new node and to specify the contents of the new node (see Figure 9 and column 8 lines 59-65; *“FIG. 9 illustrates adding an Order node Or1, Result node Re1 and Flow Control node FI1 to a template”*).

Regarding claim 37, Macrae teaches that the editing means is arranged to enable the healthcare practitioner to specify functionality associated with a node (see column 8 lines 59-65; *“The Order node Or1 contains the physician's orders, such as lab tests, nursing procedures, x-rays, prescriptions, and other kinds of treatments or actions. These generalized orders may be taken from a library and placed in Order node Or1”*).

Regarding claim 39, Macrae teaches that the editing means is arranged to enable the healthcare practitioner to control the positioning of the new node within the page and interconnection of the new node to the existing plurality of interconnected nodes (see column 6 lines 14-25; *“The template contains a number of graphic elements including: a start node, three triplets of an order node, a result node, a flow control node*

and an exit node. These graphical elements are positioned in window 10 in order to represent a medical healthcare treatment plan”).

Regarding claim 40, Macrae teaches recording means for recording user navigation through the plurality of interlinked nodes (see column 6 lines 26-31; *“In Flow Chart view 11, the process flow begins with a Start node, enters into the first Order nodes, and flows out to Result nodes. After the results are entered, the process flow continues on to a Flow Control node where the next step in the treatment is determined”*).

Regarding claim 41, Macrae teaches navigation analysis means for analysing the healthcare practitioner’s navigation to determine the precise path taken through the stored clinical best practice workflow process (see column 6 lines 26-31; *“In Flow Chart view 11, the process flow begins with a Start node, enters into the first Order nodes, and flows out to Result nodes. After the results are entered, the process flow continues on to a Flow Control node where the next step in the treatment is determined”*).

Regarding claim 42, Macrae teaches that information relating to each step in the process is cost quantifiable and the navigation analysis means is arranged to determine a total cost of the path taken through the stored best practice workflow (see column 2 lines 26-38; *“it is desirable to provide an apparatus and method for providing a medical healthcare plan which will 1) reduce errors associated with communications between healthcare planners and providers; 2) allow for convenient modification of medical health treatment plans; 3) provide costs associated with each step in the*

medical health treatment plan, as well as the total cost of the medical health treatment plan”).

Regarding claim 43, Macrae teaches that the navigation analysis means is arranged to analyse the performance of the healthcare practitioner through the stored best practice workflow (see column 6 lines 26-31; *“In Flow Chart view 11, the process flow begins with a Start node, enters into the first Order nodes, and flows out to Result nodes. After the results are entered, the process flow continues on to a Flow Control node where the next step in the treatment is determined”*).

Regarding claim 45, Macrae teaches that the GUI provides a user interface to a knowledge base storing the clinical best practice workflow (see column 2 lines 44-55; *“The display includes a plurality of graphic icon images, stored in the storage location, arranged on the display representing a medical treatment plan”*).

Claim 46 recites a graphical user interface having substantially the same limitations as the GUI of claim 1. Therefore, claim 46 is rejected under the same rationale.

Claim 47 recites a method having substantially the same limitations as the GUI of claim 1. Therefore, claim 47 is rejected under the same rationale.

Claims 58-64 recite a GUI having substantially the same limitations as the GUI of claims 35-39. Therefore, the claims are rejected under the same rationale.

Claims 82-85 recite a method having substantially the same limitations as the GUI of claim 1. Therefore, the claims are rejected under the same rationale.

Regarding claim 87, Macrae teaches that said clinical information is revealed on the page by selection of the node itself within the GUI by the healthcare practitioner (see Figure 14 and column 10 lines 50-55; *“Double-clicking Results node Re1 presents Result Node detail box 140”*).

Regarding claim 88, Macrae teaches that selective interaction with the node by the healthcare practitioner comprises interaction between an end-user navigational tool and the icon (see Figure 14 and column 10 lines 50-55; *“Double-clicking Results node Re1 presents Result Node detail box 140”*).

Regarding claim 89, Macrae teaches that the graphical means is arranged to graphically indicate previously executed steps in the best practice workflow to the healthcare practitioner (see column 19 lines 36-44; *“When a user takes a branch down a path that leads to a Plan node in the patient's chart, the Plan node is highlighted in both the Flow Chart and the patient Chart views”*).

Regarding claim 90, Macrae teaches that previously executed steps in the best practice workflow are graphically indicated to the healthcare practitioner (see column 19 lines 36-44; *“When a user takes a branch down a path that leads to a Plan node in the patient's chart, the Plan node is highlighted in both the Flow Chart and the patient Chart views”*).

Regarding claim 91, Macrae teaches interacting with a node displaying a graphical indication that concealed clinical information relating to the step in the stored best practice workflow associated with the node is available, thereby revealing the concealed clinical information in use (see column 9 lines 38-41; *“By double-clicking*

Order node Or1 in the triplet shown in FIG. 9 or 10. The Order Node Detail dialog box 110 appears showing the list of orders (i.e., content) in Order node Or1”).

Claim 92 recites a GUI having substantially the same limitations as the GUI of claim 1. Therefore, claim 92 is rejected under the same rationale.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Macrae (5,786,816) *supra*.

Regarding claim 5, Macrae teaches every limitation of claim 5 except that the presentation means comprises a plurality of drop-down lists of location-specific information. Although Macrae does not teach using a plurality of drop-down lists to edit location-specific information, Macrae does disclose the use of drop-down lists (see Figure 21 and column 14 lines 40-46; “*For this example, click the At Probability drop-down arrow button 213 and select 10 as the percentage*”). Drop-down lists are a standard user interface component for use in data entry. Macrae makes use of drop-down lists in some instances. It would have been an obvious design choice for one of ordinary skill in the art at the time the invention was made to use a plurality of drop-down lists to edit location-specific information.

Claims 8-10, 28-34, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Macrae (5,786,816) *supra* and DeBusk et al. (hereinafter DeBusk), United States Patent 6,314,556.

Regarding claim 8, Macrae teaches every limitation of claim 8 except means for converting the entered data into a classification code representing that data. The use of standard classification codes was well known in the healthcare industry at the time the invention was made. DeBusk mentions the use of standardized codes within his healthcare application (see DeBusk column 13 lines 28-43; “*the Procedure Attributes field 316 is provided which will allow the user to select standardized procedure codes, such as the AMA IC9 code and description, for the procedure to be represented by the pathway*”). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use standardized classification codes in a healthcare application in order to distinctly identify information.

Regarding claim 9, Macrae/DeBusk teaches that the classification code comprises a standard classification code describing a complete range of possible data inputs relevant to the subject of the stored clinical best practice workflow (see DeBusk column 13 lines 28-43).

Regarding claim 10, Macrae/DeBusk teaches that the classification code represents one of the group comprising a diagnosis, a symptom, an action, a treatment and an operative procedure (see DeBusk column 13 lines 28-43).

Regarding claim 28, Macrae/DeBusk teaches searching means for searching an externally accessible knowledge base, the searching means being arranged to convert a selected information topic (see Macrae column 32 lines 37-41; *“The Find Item method 410 allows a client application to search through the library to find all the items that match the specified attributes and search criteria. The method returns a container holding the matching library items, or actually references to the items”*) into a predetermined classification code representing that topic and to transmit that classification code within an information request to the knowledge base for relevant information contained therein (see DeBusk column 13 lines 44-59; *“This function is provided with a database search capability, by the Search button 318, which allows the user to search a pre-configured procedure code database for the appropriate procedure information”*).

Regarding claim 29, Macrae/DeBusk teaches that the classification code comprises a standard classification code describing a complete range of possible data inputs relevant to the subject of the stored best practice workflow (see DeBusk column 13 lines 28-43; *“the Procedure Attributes field 316 is provided which will allow the user to select standardized procedure codes, such as the AMA IC9 code and description, for the procedure to be represented by the pathway”*).

Regarding claim 30, Macrae/DeBusk teaches that the classification code represents one of the group comprising a diagnosis, a symptom, an action, a treatment and an operative procedure (see DeBusk column 13 lines 28-43; *“the Procedure Attributes field 316 is provided which will allow the user to select standardized*

procedure codes, such as the AMA IC9 code and description, for the procedure to be represented by the pathway”).

Regarding claim 31, Macrae/DeBusk teaches that the searching means is arranged to receive a response to the information request and display the results of the search to the healthcare practitioner (see Macrae column 32 lines 37-41; “*The Find Item method 410 allows a client application to search through the library to find all the items that match the specified attributes and search criteria. The method returns a container holding the matching library items, or actually references to the items*”).

Regarding claim 32, Macrae/DeBusk teaches that the searching means is arranged to receive a response to the information request and use the response to determine a relevant page of a plurality of pages for display to the healthcare practitioner (see Macrae column 32 lines 37-41).

Regarding claim 33, Macrae/DeBusk teaches that the searching means is arranged to display a plurality of information topics to the healthcare practitioner and to enable selection of at least some of these information topics, each information topic being related to the current node location of the healthcare practitioner within the current page (see Macrae column 32 lines 37-41).

Regarding claim 34, Macrae/DeBusk teaches that the searching means is arranged to enable the healthcare practitioner to enter additional information topics not displayed by the searching means (see Macrae column 32 lines 37-41).

Regarding claim 38, Macrae/DeBusk teaches that the editing means is arranged to enable the healthcare practitioner to add or edit a classification code

associated with the contents of a node (see Macrae column 6 lines 14-25; “*FIG. 1 illustrates an example of a Template Builder window with an open template*”, the Template Builder allows users to add any node and the contents of the added node).

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Macrae (5,786,816) *supra* and Balint et al. (hereinafter Balint), United States Patent 5,542,024.

Regarding claim 17, Macrae teaches every limitation of claim 17 except for a note recordal means for recording textual notes generated by the healthcare practitioner relating to a particular node, the note recordal means being arranged to link the note with the particular node such that the stored note is retrievable when the healthcare practitioner has navigated to that particular node. Balint teaches an expert system in which users can record textual notes that will also be visible to other users of the system (see Balint claims 21 and 22; “*means for creating a note data base record to be linked to a currently displayed decision node in the expert system in response to the selection of a write representative icon displayed by said Graphical User Interface*” and “*includes means to add a read representative icon to said Graphical User Interface display whenever one of said note data base records has been linked to the decision node of the knowledge record then being displayed*”). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow textual notes to be attached to workflow nodes in order to provide an intuitive method of knowledge exchange between users of the system.

Regarding claim 18, Macrae/Balint teaches that the note recordal means is arranged to record a variation of the stored clinical best practice workflow at a particular node as determined by the healthcare practitioner (see Balint claims 21 and 22).

Regarding claim 19, Macrae/Balint teaches feedback generation means for converting a note determined by the healthcare practitioner into a transmittable message and for transmitting the message to another healthcare practitioner having access to a version of the GUI (see Balint claims 21 and 22).

Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Macrae (5,786,816) *supra* and Campbell et al. (hereinafter Campbell), United States Patent 6,047,259.

Regarding claim 22, Macrae teaches every limitation of claim 22, but does not explicitly disclose that the GUI has access to an Electronic Patient Record Management System and the GUI further comprises an EPRMS management means for obtaining and presenting details of selected electronic patient record in a portion of the page. Campbell teaches an interactive diagnosis and treatment system that accesses electronic patient records stored on a server (see Campbell column 14 lines 19-29; “*When the user selects a screen for display, the patient data in the display is drawn from the current patient records on the server*”). It would have been obvious to one of ordinary skill in the art at the time the invention was made to access patient record information as taught by Campbell in the invention of Macrae so that healthcare practitioners do not have to re-enter data that is already accessible electronically.

Regarding claim 23, Macrae/Campbell teaches that the EPRMS management means further comprises population means for populating one or more nodes with at least some of the details of a selected electronic patient record, thereby reducing any required data entry at that node (see Campbell column 14 lines 19-29).

Regarding claim 24, Macrae/Campbell teaches that the EPRMS management means is arranged to use the details of the selected electronic patient record to determine what information is required at a node from the healthcare practitioner (see Campbell column 14 lines 30-35; *"When the user initiates the exam, the server evaluates the observations and determines which questions and warnings should be displayed to the user. As the user accesses screens in the exam, these warnings or questions form part of the display screen. Thus, the display changes based on prior recorded observations"*).

Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Macrae (5,786,816) *supra* and Greenberg et al. (hereinafter Greenberg), United States Patent Application Publication 2004/0039602.

Regarding claim 25, Macrae teaches every limitation of claim 25 except referral means for generating a referral message, the referral means being provided at a node and using information associated with the node to populate at least some of the referral message on selection by the healthcare practitioner. Greenberg teaches a computerized system that assists a healthcare professional in accessing patient medical record data, following clinical pathway protocols, and entering data (see Greenberg

paragraph [0005]; *"the system helps to ensure that the patient is properly evaluated, all pertinent information is gathered, etc. and that all appropriate treatment options are considered. Additionally, patient medical record data is available, and examination data is recorded, at the point of care. Optionally, the system may store a protocol database accessible by the examination and/or treatment modules to guide the clinician through examination and treatment according to predefined protocols. For example, these treatment protocols can be established on the basis of clinical pathways, research protocols, or cost of care"*). Greenberg also teaches that the invention is capable of generating and storing referrals (see Greenberg paragraph [0007]; *"The system is capable of generating medical and related records (collectively, "medical records"), such as examination notes, orders, bills, referral letters, etc., by incorporating relevant data stored by the system into predefined templates, such as Microsoft Word or Excel documents"*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to generation, storing, and accessing of referrals as taught by Greenberg in the invention of Macrae so that all relevant information about a patient is accessible from the same system.

Regarding claim 26, Macrae/Greenberg teaches that the referral means comprises a graphical icon and selection by the healthcare practitioner comprises interaction between a user navigational tool and the icon (see Figure 1, Macrae's invention makes extensive use of icons for interaction and navigation).

Regarding claim 27, Macrae/Greenberg teaches that the referral means is arranged to use information obtained from an electronic patient record to populate

automatically at least some of the referral message (see Greenberg paragraph [0007]; *"The system is capable of generating medical and related records (collectively, "medical records"), such as examination notes, orders, bills, referral letters, etc., by incorporating relevant data stored by the system into predefined templates, such as Microsoft Word or Excel documents"*).

Claim 86 is rejected under 35 U.S.C. 103(a) as being unpatentable over Macrae (5,786,816) *supra* and Huyn et al. (hereinafter Huyn), United States Patent Application Publication 2002/0035486.

Regarding claim 86, Macrae teaches every limitation of claim 86 except that the editing means is arranged such that its use by the healthcare practitioner is restricted by permissions. Huyn teaches a computerized clinical questionnaire system that makes use of permissions (see Huyn paragraph [0064]; *"once the user has submitted the response data, he or she cannot modify the data without permission from the questionnaire administrator"*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use permissions as taught by Huyn to regulate the use of the invention taught by Macrae to prevent unauthorized changes from being made to the system.

Response to Arguments

Applicant's arguments with respect to claims 1-43, 45-47, 58-64, and 82-92 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Alvesteffer whose telephone number is (571)270-1295. The examiner can normally be reached on Monday-Friday 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dennis Chow can be reached on (571)272-7767. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Stephen Alvesteffer
Examiner
Art Unit 2173

/S. A./
Examiner, Art Unit 2173

/Tadesse Hailu/
Primary Examiner, Art Unit 2173